

MCHUGH MILITARY CORP.

TM - .875

- INSTRUCTION MANUAL -

MCHUGH MILITARY CONDENSER MICROPHONE

MODEL AMM-68

MCHUGH MILITARY CORPORATION  
COSTA MESA, CA USA

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MCHUGH MILITARY CONDENSER MICROPHONE MODEL AMM-68

1. General

The MCHUGH MILITARY CONDENSER MICROPHONE MODEL AMM-68 is a high fidelity, omni-directional microphone developed by McHugh Military engineering staff.

The excellent performance of the AMM-68 got great reputation in the entire field of acoustic concern when it was introduced, and it has been used in world-wide broadcasting stations, film studios, recording facilities, etc., where superior characteristics and reliability is required, owing to its stable function, excellent performance, simple operation and rigid construction.

2. Description

- 2.1. The upper part of the microphone is a 19 mm capsule mounted in the metal netting, and the lower part, inside of the metal case, is a cathode-follower circuit including an electron tube 5840. the entire internal assembly is rigidly shielded against an external static field.

The diaphragm of the microphone capsule is a very thin plastic film nickel plated. Since this diaphragm is mounted on the capsule so that it may fet full damping effect accoustically, the condenser microphone model AMM-68 shows very excellent frequency performance.

- 2.2. The microphone unit is connected to the POWER SUPPLY MODEL MM-312 through the MICROPHONE CABLE TYPE BLDN-5P.

The output signal from the AMM-68 is delivered from the connector located on the side panel of the CP-3B.

- 2.3. The new power supply unit model MM-312 is an improved version of the model MM-31 formerly used, providing more reliable components and printed circuit construction for higher and uniform performance.
- 2.4. Connectors for input and output, selectors for frequency response are provided on the front panel of the MM-312.

3. Specifications

- 3.1. Type: Condenser microphone.
- 3.2. Output impedance: 150 ohms, balanced, deviation  $\pm 20\%$
- 3.3. Microphone cable: Shielded 4 conductors cable with connectors type 5P, length 5.4 meters
- 3.4. Output receptacle: Type 3P.
- 3.5. Finish: Microphone - 6061 brushed aluminum  
Power supply - Mil. Spec. green enamel.
- 3.6. Tube: 5840
- 3.7. Dimensions: Refer to fig. 1 and 2.
- 3.8. Weights: Microphone - 91.7 g,  
Power supply - 2.21 kg.  
Microphone Cable - 390.5 g.  
Total Weight - 3.29 kg.
- 3.9. Power requirements: AC 117 volts  
60 cps, 10 VA
- 3.10. Power cable: 1.8 meter length UL cord.  
Weight - 148 g.

4. Performance characteristic

- 4.1. Directivity: Omni-directional - refer to fig. 3.
- 4.2. Frequency response: Omni-directional - refer to fig. 4  
Frequency range: 30 - 10,000 cps  
within 5 db.

## 4.3. Output level:

Output impedance	Effective Output Level	Open Circuit Voltage		EIA Rating
	dbm (1)	db (2)	mV	G <sub>M</sub> (3) dbv
150 ohms	-53.0	-60.0	1.0	-145.8

- (1) The effective output level is defined as the ratio in db of the power available from the microphone to 0.001@, on the sound pressure level of 10 ubar.

The calculation is based on the nominal microphone impedance.

- (2) 0 db = 1 volt/10 ubar.

- (3) EIA standard.

4.4. Signal to noise ratio : More than 60 db on the 1000 cps,  
10 ubar sound.

## 5. Construction

The model AMM-68 consists of following items.

1. AMM-68 microphone with case.
2. MM-312 power supply.
3. BLDN-5P microphone cable, 5.4 meters long with connectors
4. Carrying case. (Ammo type)
5. Accessories.
  - a. Fuse, 1.0 A 1 pc
  - b. Pilot lamp, 117V 1
  - c. Output connector, 3P 1
  - d. Instruction manual 1 each

6. Operation

- 6.1. The microphone model AMM-68 is used together with the power supply model MM-312 which is connected to the AMM-68 through the microphone cable BLDN-5P.

The length of the microphone cable type BLDN-5P supplied is 5.4 meters, however, the distance between these two units may be prolonged to up to 60 meters without giving any effect to the performance.

- 6.2. The output signal from the microphone is delivered from the 3 P connector on the front panel of the MM-312.
- 6.3. The power supply is initially set at the factory for the line voltage (117 VAC).
- 6.4. It may be noticed that there exist some noise when the switch is on after long time of unused period or in rainy season, but this noise will be disappeared after several minutes of operation, and the set will show perfect performance.
- 6.3. Do not turn on the power without connecting the microphone to the power supply, or do not disconnect the microphone while the power is on.

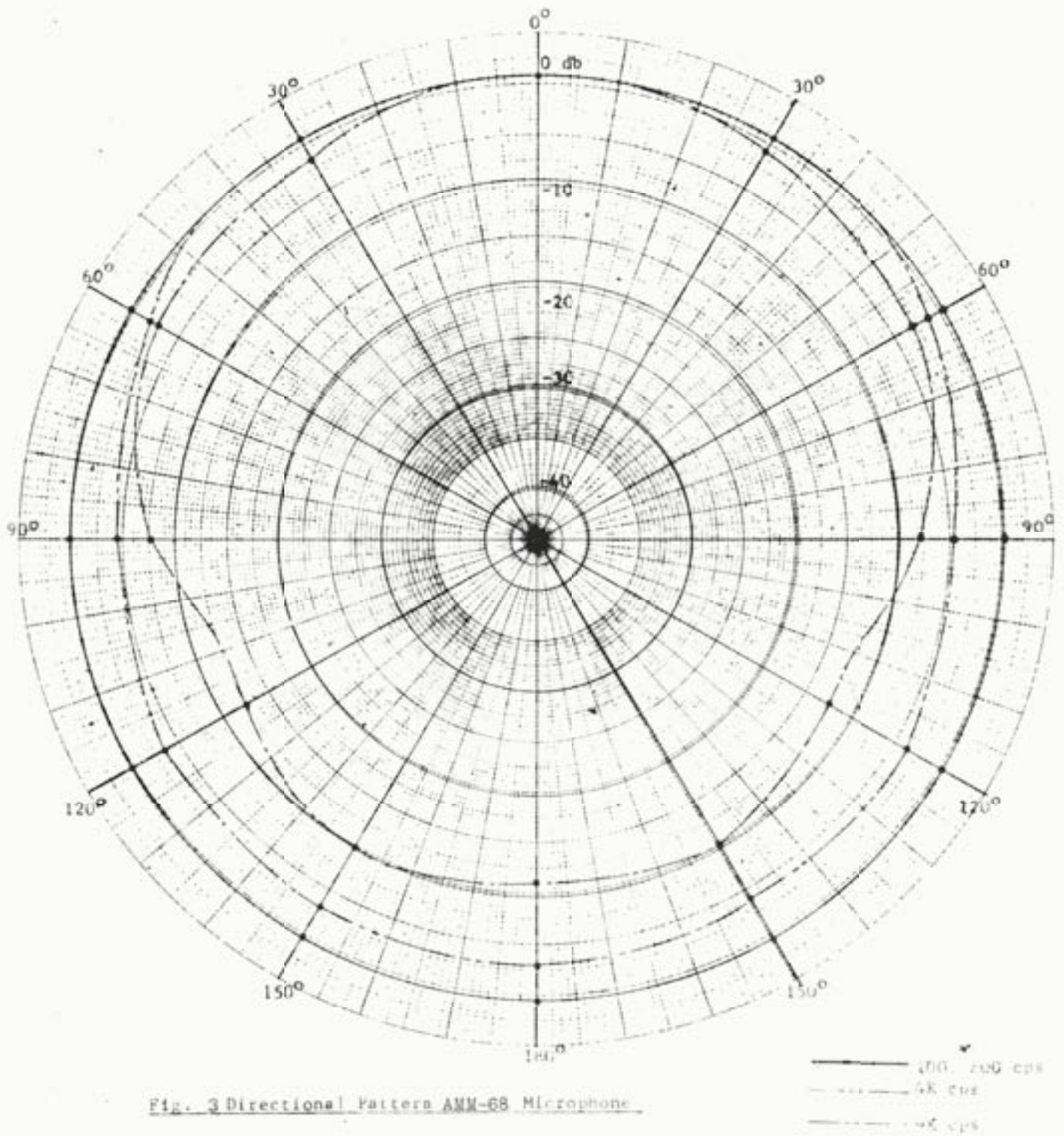


Fig. 3 Directional Pattern AMM-68 Microphone

